

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
9 June 2005 (09.06.2005)

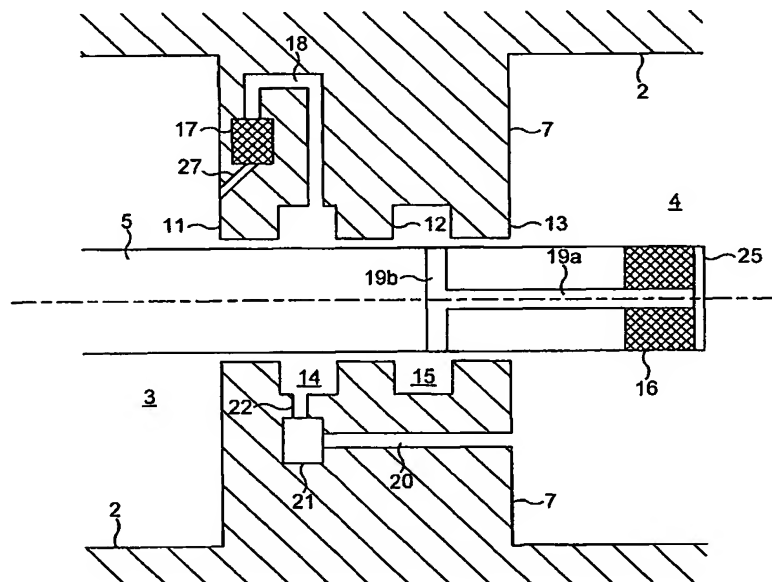
PCT

(10) International Publication Number  
**WO 2005/052374 A1**

- (51) International Patent Classification<sup>7</sup>: **F04C 27/00**, (74) Agent: **BOOTH, Andrew, Steven**; The Boc Group Plc, Chertsey Road, Windlesham, Surrey GU20 6HJ (GB).  
F04B 37/14
- (21) International Application Number: PCT/GB2004/004725 (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 9 November 2004 (09.11.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 0326613.7 14 November 2003 (14.11.2003) GB
- (71) Applicant (for all designated States except US): **THE BOC GROUP PLC** [GB/GB]; Chertsey Road, Windlesham, Surrey GU20 6HJ (GB).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **CHATFIELD, Francis, Phillip** [GB/GB]; Boc Edwards, Unit2, Dolphin Road, Shorham by sea., West Sussex BN43 6PY (GB).
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: VACUUM PUMP



(57) Abstract: A vacuum pump is provided comprising a pumping mechanism, a drive shaft for driving the pumping mechanism and a gear box connected to the drive shaft for rotating the drive shaft. Pressure control means are provided to define a path to allow fluid to flow from the pumping mechanism to the gear box in order to reduce the pressure difference therebetween. A reservoir is located within this path for collecting oil passing along the drive shaft from the gear box towards the pumping mechanism. In use, this enables pressurised fluid flowing from the pumping mechanism towards the gear box to urge oil which has collected in the reservoir, towards the gear box.

WO 2005/052374 A1



**Published:**

— *with international search report*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*